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UNITED STATES
DEPARTMENT OF THE INTERIOR
MINING ENFORCEMENT AND SAFETY ADMINISTRATION

District 9

REPORT OF UNDERGROUND COAL MINE INVESTIGATION
FATAL ROOF FALL ACCIDENT

Somerset Mine (I.D. No. 05-00294)
United States Steel Corporation
Somerset, Gunnison County, Colorado

December 18, 1976 ✓

by

Donald Gabriella

Originating Office - Mining Enforcement and Safety Administration
P.O. Box 15037, 1457 Armons Street, Denver, Colorado
J. L. Bishop, Subdistrict Manager

REPORT OF UNDERGROUND COAL MINE INVESTIGATION

FATAL ROOF FALL ACCIDENT

Somerset Mine (I.D. No. 05-00294)

United States Steel Corporation

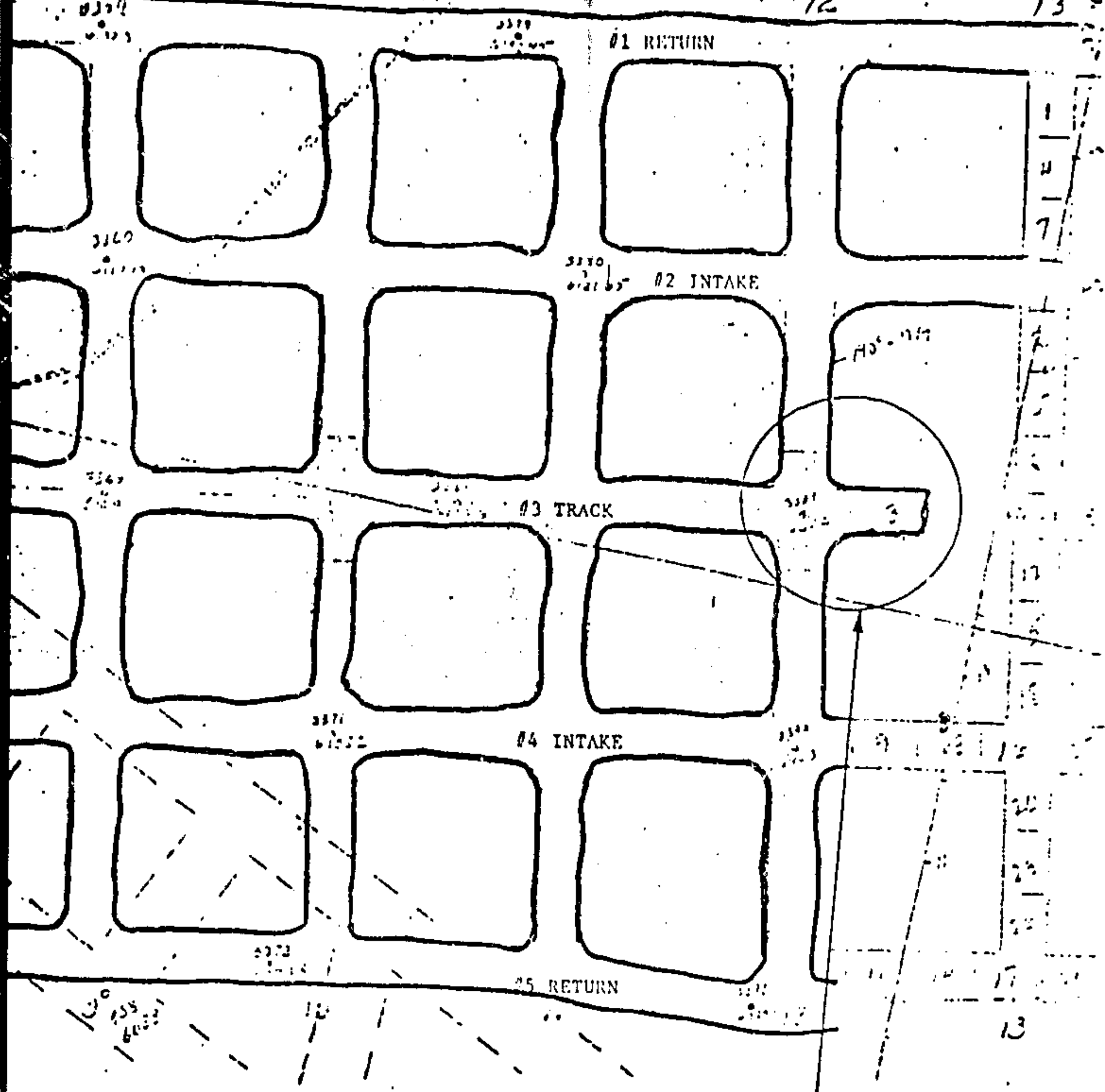
Somerset, Gunnison County, Colorado

December 18, 1976

S 79° 38' 46" W

12

13



SOMERSET MINE (I.D. #05-00294)

C-SEAM - 1 LEFT

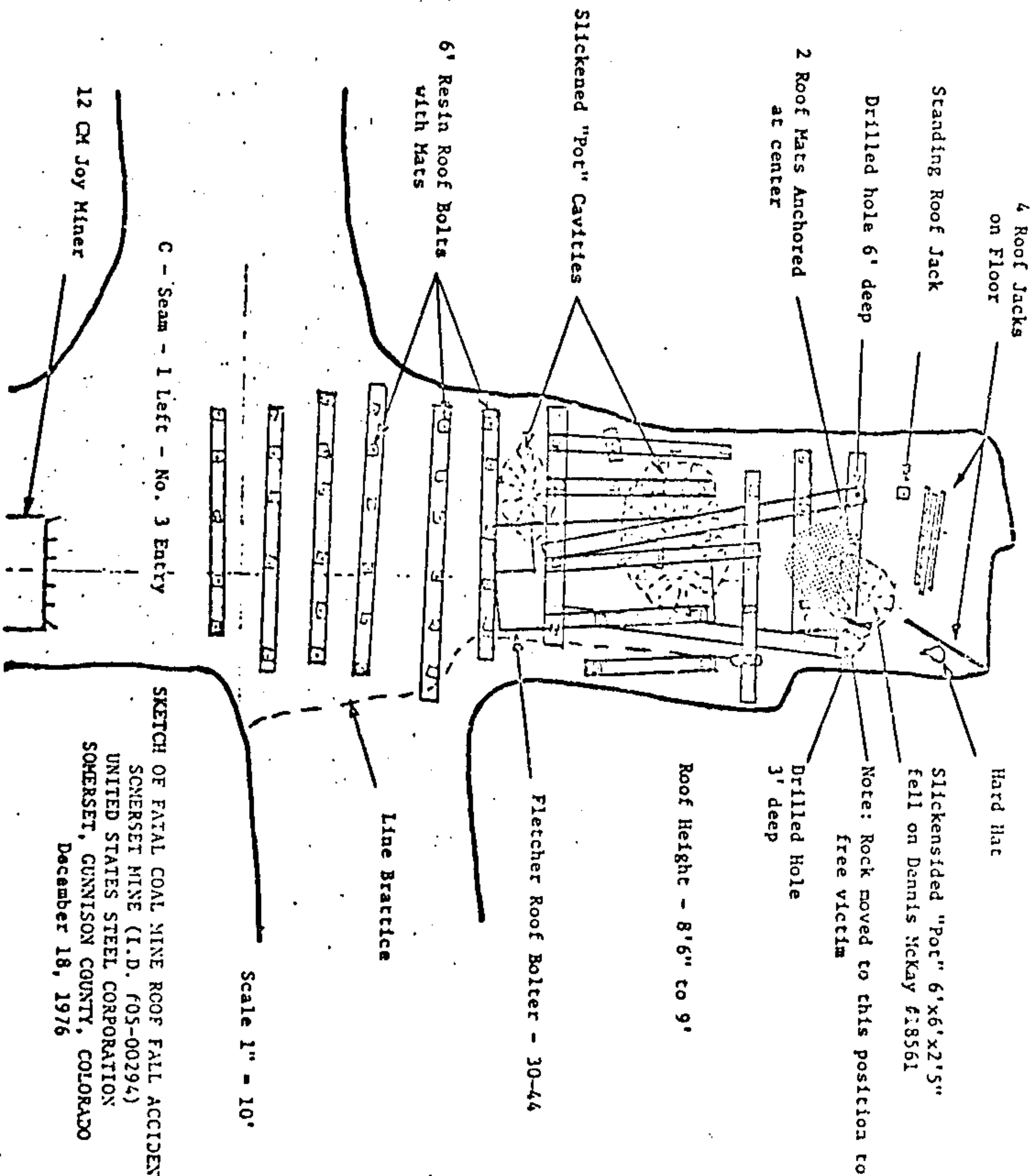
UNITED STATES STEEL CORPORATION

SOMERSET, GUNNISON COUNTY, COLORADO

December 18, 1976

Location of
Coal Mine Roof Fall Accident

Scale 1" = 60'



SKETCH OF FATAL COAL MINE ROOF FALL ACCIDENT
 SOMERSET MINE (I.D. #05-00294)
 UNITED STATES STEEL CORPORATION
 SOMERSET, GUNNISON COUNTY, COLORADO
 December 18, 1976

Abstract of Investigation

Title of Investigation: Report of
Underground Coal Mine Investigation
(Fatal Roof Fall)

Report Date: December 27, 1976

Mine: Somerset

Mine I.D. Number: 05-00294

Company: United States
Steel Corporation

Town, County, State: Somerset,
Gunnison County, Colorado

Author(s): Donald Gabriella

Mine Information

Daily Production 4,000 tons

Surface Employment 36

Underground Employment 222

Thickness of Coalbed 9 feet

Last Quarter Disabling Injury Frequency
Rate (HSAC) for:

Industry 32.91

This Operation 8.57

Training Program Approved Yes

Originating office - Mining Enforcement
and Safety Administration Coal Mine
Health and Safety District 9

Address: P.O. Box 15037
Denver, Colorado 80215

Authority - This report is based on an
investigation made pursuant to the
Federal Coal Mine Health and Safety Act
of 1969 (83 Stat. 742)

ABSTRACT

On Saturday, December 18, 1976, at about 2:30 p.m., a roof fall accident occurred at the face of No. 3 entry, C seam 1 left section of U.S. Steel's Somerset Mine resulting in the death of Dwight D. McCay, roof bolter helper. McCay had 27 months mining experience, the last five weeks of which were with U.S. Steel, classed as a laborer unskilled. The accident occurred when a bounce threw the two roof bolters into the unbolted area. A kettle bottom measuring 6' by 6' and 36" thick at the apex fell striking McCay. The Fletcher roof bolter was not provided with overhead protection to protect the drill operator while drilling. A temporary roof support (a TRS) system had been removed prior to the accident.

Information for this report was compiled through a MESA Investigation that was started December 20, 1976.

Name

Address

Company officials:

President Vice President: J. F. Core, 600 Grants St., Rm 5837, Pittsburgh, Pa.

Superintendent L. R. Miller, P.O. Box 1, Somerset, Colorado 81434

Safety Director R. W. Conkle, P.O. Box 1, Somerset, Colorado 81434

Principal officer - H&S L. R. Miller, P.O. Box 1, Somerset, Colorado 81434

Labor Organization U.M.W.A., P.O. Box 51, Pannia, Colorado 81428

Chairman - H&S Committee Dave Phillips, Rural Route 2, Hotchkiss, Colorado 81419

Evidence

On Saturday, December 18, 1976, at 8:00 a.m., a roof bolting crew, under the supervision of Robert Pobirk, Mine Foreman, entered the mine and traveled to the C seam 1 left working section. Pobirk examined the proposed work areas and then instructed the roof bolting crew which areas were to be roof bolted.

Larry Knowles, roof bolter, and Dwight D. McCay (victim), roof bolter helper, installed two roof bolts in the Number 2 entry with a Fletcher type "D" roof bolting machine. (The Fletcher roof bolting machine had been equipped with a factory installed temporary roof support system; however, the temporary roof support system had been removed for repairs). Knowles and the victim then went to the No. 5 entry and took a CD41 coal drill, which had been converted to a single boom roof bolting machine, and installed 17 resin roof bolts in the No. 1 entry. At this time Knowles and the victim ate lunch.

After the lunch period the roof bolting crew took the Fletcher roof bolter from the No. 2 entry to the No. 3 entry and started installing resin type roof bolts. Five safety jacks had been set in the No. 3 entry by the miner crew when the area had been mined on the previous coal producing shift. Five bolts 6' in length had been installed securing one row of roof mats to the top. The center row in the next row of roof mats was drilled and a roof bolt installed to hold the mats in place. Knowles had completed drilling the center hole in the left roof mat and the victim was drilling the end hole in the right roof mat. At this time a bump occurred throwing both men into the face area. Four of the five temporary roof support jacks were dislodged. Knowles stated that he quickly got back under the supported roof and that it was very dusty. Knowles could see the silhouette of the victim kneeling and pulling on his lamp cord to retrieve his hard hat. Knowles called and told the victim to stay where he was until the dust settled. The kettle bottom fell at this time striking McCay. The victim was recovered from under the fallen rock about 15 minutes later.

McCay was transported to the North Fork Clinic at Paonia, Colorado, where he was pronounced dead on arrival by Dr. Brown.

Discussion and Evaluation

The investigation revealed the following factors relevant to the occurrence of the accident:

1. Two kettle bottoms had fallen previously near the accident scene.
2. The C seam of the Somerset Coal Mine has a history of kettle bottoms in the roof throughout the mine.
3. The kettle bottoms cannot be detected by the sound or vibration method of roof testing.
4. The temporary roof support system (T.R.S.) had been removed and the machine was being used without a cab or canopy over the drilling controls.

Findings of Fact

1. The Fletcher roof bolting machine was being operated without a cab or canopy, a violation of Section 75.1710.
2. The Fletcher roof bolting machine was not maintained in a safe operating condition in that the temporary roof support system had become inoperative and removed from the machine. The machine was not removed from service, a violation of Section 75.1725.
3. Only five temporary roof supports were installed in the No. 3 entry before roof bolting operations began, a violation of Section 75.200.

Conclusion

The accident and resultant fatality occurred due to the failure of management to remove from service the Fletcher roof bolting machine which was not maintained in safe operating condition.

Respectively submitted,

/s/Donald Gabriella
Donald Gabriella

APPENDIX

The investigation was conducted by the Mining Enforcement and Safety Administration and those persons present during the investigation were:

United States Steel Corporation Officials

P. E. Watson	General Superintendent
H. H. Hayden	Asst. to the General Superintendent
L. R. Miller	Mine Superintendent
L. P. Clark	Chief Inspector
R. W. Conkle	Mine Inspector
R. A. Pobirk	General Mine Foreman

United Mine Workers of America

N. V. Halamandaris	International Executive Board Member
B. Moore	International Executive Board Member
D. Phillips	Chairman Safety Committee
D. Peak	Safety Committeeman
D. Morrow	Safety Committeeman
D. Story	Safety Committeeman
J. P. Campbell	Safety Committeeman
C. H. Pace	Safety Committeeman
L. Knowles	Witness

Colorado Department of Mines

A. Deborski	Chief State Mine Inspector
M. O'Connor	State Mine Inspector

Mining Enforcement and Safety Administration

R. Malensek	Coal Mine Inspection Supervisor
D. Gabriella	Supervisory Mining Engineer (Accident Prevention)
J. S. Miller	Supervisory Mining Engineer (Roof Control)
W. R. Ward	Coal Mine Inspector
M. S. Horbatko	Mining Engineer Technician

Victim Data

Name Dwight D. McCay Sex Male SSN 522-84-4013

Age 23 Job Classification Laborer (Unskilled) Experience at this

Classification 5 weeks Total Mining Experience 27 months

What activity was being performed at time of accident? Roof bolter helper

Victim's experience at this activity approx. 5 weeks Was victim trained in

this task? On the job training only

Health and Safety Courses/Training Received (Related to Accident) Date Rec'd

Use of self rescuer (taken while employed by Kaiser Steel Co.) 3-18-76

First Aid (taken while employed by Kaiser Steel Co.) 8-18-76

Federal Rules and Regulations (taken while employed by Kaiser Steel) 8-18-76

Use and Handling of Explosives (taken while employed by Kaiser Steel) 8-18-76

Supervisor Data (Supervisor of Victim)

Name Robert Pobirk Certified: Yes X No

Experience as Supervisor 6 years Total Mining Experience 11 years

Health and Safety Courses/Training Received Date Received

Roof and Rib Control 10-1-76

First Aid 6-25-76

Principals of Mine Rescue 11-22-75

Accident Prevention 11-22-75

When was the supervisor last present at accident scene prior to the accident?
2:00 p.m. What did he do when he was there?

Inspect working area

When was he last in contact with the victim? 2:00 p.m.

Did he issue instructions relative to the accident? No

Was he aware of or did he express and awareness of any unsafe practice or
condition? No

Was he involved in any activity other than supervision?

No

(October 1974)

Symbol.....

UNITED STATES
DEPARTMENT OF THE INTERIOR
MINING ENFORCEMENT AND SAFETY
ADMINISTRATION

Coal Mine Health and Safety Subdistrict Office
1457 Armona Street
Denver, Colorado 80215

TO THE OPERATOR, OR HIS AGENT, OF THE

.....*SOMERSET*.....MINE

Company.....*U.S. Steel Corporation*

Location.....*SOMERSET, GUNNISON COUNTY, COLO.*

I.D. No.....*05-00294*.....

☐ ORDER

☒ NOTICE

No. *1-12 W.R.W.*

Time: *10:30*..... ☒ A.M. ☐ P.M. Date: *DEC. 20.. 1976* *Hershel H. Hyde*.....
Assistant to General Superintendent

Pursuant to the Federal Coal Mine Health and Safety Act of 1969 (83 Stat. 742; 30 USC 801; PL 91-173) the undersigned duly authorized representative of the Secretary of the Interior, upon making an inspection of the above named mine on this date finds that the following described condition or practice exists in the mine:

Condition or Practice

Only 5 temporary supports were installed in the working face in No. 3 entry before roof bolting operation began. A torque wrench was not provided on the roof bolting machine. Torque test of the first resin bolt installed was not conducted prior to the removal of temporary support.

[Cont'd Sheet No.]

The undersigned finds that:

☐ Men had been withdrawn prior to issuance of this order

☐ An IMMINENT DANGER EXISTS in that the condition or practice described could reasonably be expected to cause death or serious physical harm before such condition or practice can be abated.

☒ There has been a violation of *25.200* of Part *25*, Title 30, Code of Federal Regulations, a mandatory health or safety standard, but the violation has not created an imminent danger.

☐ The undersigned further finds:

☐ the violation is of such nature as could significantly and substantially contribute to the cause and effect of a mine safety or health hazard, and is caused by an unwarrantable failure to comply with such standard.

☐ The violation was found ☐ during the same inspection in which

☐ during a subsequent inspection made within 90 days after

Notice No. was issued on, 19.....

and is also caused by an unwarrantable failure to comply with such standard.

☐ the violation is similar to the violation of the mandatory health or safety standard which resulted in the issuance of Withdrawal Order No. on, 19....., and no inspection of the mine has been made since such date which disclosed no similar violation.

ACTION REQUIRED

☒ NOTICE

The violation of the mandatory health or safety standard described above shall be totally abated by *9* o'clock *P.M.* on *DECEMBER 21*, 19*76*.

☐ ORDER

You are hereby ORDERED to cause immediately all persons, except those referred to in subsection (d) of section 104 of the Act, to be withdrawn from, and to be prohibited from entering, the area of the mine described below until an authorized representative of the Secretary of the Interior determines that the imminent danger no longer exists or the violation of the mandatory health or safety standard has been abated.

Area of Mine

Cont'd Sheet No.

Signed.....*William P. Libbert*.....
Authorized Representative

Orders 104 (4) ☐ 104 (c) (1) ☐ 104 (c) (2) ☐

Notices 104 (b) ☒ 104 (c) (1) ☐

(October 1974)

Symbol.....

UNITED STATES
DEPARTMENT OF THE INTERIOR
MINING ENFORCEMENT AND SAFETY
ADMINISTRATION

Coal Mine Health and Safety Subdistrict Office
1457 Armons Street
Denver, Colorado 80215

TO THE OPERATOR, OR HIS AGENT, OF THE

.....*SOMERSET*.....MINE

Company *U.S. Steel Corporation*

Location *SOMERSET, GUNNISON COUNTY, COLO*

I.D. No. *Q.5-00224*

☐ ORDER

☒ NOTICE

No. *2-LRW*

Time: *10:40* ☒ A.M. ☐ P.M. Date: *DEC. 20* 19*76* *HERSCHEL HAYDEN*.....
Assistant to General Superintendent (Person Served)

Pursuant to the Federal Coal Mine Health and Safety Act of 1969 (83 Stat. 742; 30 USC 601; PL 91-173) the undersigned duly authorized representative of the Secretary of the Interior, upon making an inspection of the above named mine on this date finds that the following described condition or practice exists in the mine:

Condition or Practice

A canopy was not provided over the operating controls located on the boom of the Hatcher roof bolting machine in "C" seam

[Cont'd Sheet No.]

The undersigned finds that:

- ☐ Men had been withdrawn prior to issuance of this order
- ☐ An IMMINENT DANGER EXISTS in that the condition or practice described could reasonably be expected to cause death or serious physical harm before such condition or practice can be abated.

☒ There has been a violation of *75.1.2.19* of Part *25*, Title 30, Code of Federal Regulations, a mandatory health or safety standard, but the violation has not created an imminent danger.

☐ The undersigned further finds:

- ☐ the violation is of such nature as could significantly and substantially contribute to the cause and effect of a mine safety or health hazard, and is caused by an unwarrantable failure to comply with such standard.
- ☐ The violation was found ☐ during the same inspection in which ☐ during a subsequent inspection made within 90 days after

Notice No. was issued on, 19.....

and is also caused by an unwarrantable failure to comply with such standard.

- ☐ the violation is similar to the violation of the mandatory health or safety standard which resulted in the issuance of Withdrawal Order No. on, 19....., and no inspection of the mine has been made since such date which disclosed no similar violation.

ACTION REQUIRED

- ☒ NOTICE The violation of the mandatory health or safety standard described above shall be totally abated by *8* o'clock *P.M.* on *DECEMBER 21*, 19*76*.
- ☐ ORDER You are hereby ORDERED to cause immediately all persons, except those referred to in subsection (i) of section 104 of the Act, to be withdrawn from, and to be prohibited from entering, the area of the mine described below until an authorized representative of the Secretary of the Interior determines that the imminent danger no longer exists or the violation of the mandatory health or safety standard has been abated.

Area of Mine

Cont'd Sheet No.

Signed *William R. Smith*
Authorized Representative

Orders 101 (a) ☐ 101 (b) (1) ☐ 101 (c) (2) ☐
Notices 101 (b) ☒ 101 (c) (1) ☐

(October 1, 74)

Symbol.....

UNITED STATES
DEPARTMENT OF THE INTERIOR
MINING ENFORCEMENT AND SAFETY
ADMINISTRATION

Coal Mine Health and Safety Subdistrict Office
1457 Armon Street
Denver, Colorado 80215

TO THE OPERATOR, OR HIS AGENT, OF THE

..... *SOMERSET* MINE

Company *U.S. STEEL CORPORATION*

Location *SOMERSET, GUNNISON COUNTY, COLORADO*

I.D. No. *D.S.-00-294*

☐ ORDER

☒ NOTICE

No. *2-4URW*

Time: *10:45* ☒ A.M. ☐ P.M. Date: *DEC 20* 1976 *Hercules Hayden*

Pursuant to the Federal Coal Mine Health and Safety Act of 1969 (93 Stat. 742; 30 USC 901; PL 91-173) the undersigned duly authorized representative of the Secretary of the Interior, upon making an inspection of the above named mine on this date finds that the following described condition or practice exists in the mine:

Condition or Practice

The Blatcher song bolting machine was not maintained in a safe operating condition in that the remote temporary support systems had become inoperative and had been removed from the machine. The machine was not removed from

[Cont'd Sheet No.]

The undersigned finds that:

- ☐ Men had been withdrawn prior to issuance of this order *service. A canopy was not provided over the*
☐ An IMMINENT DANGER EXISTS in that the condition or practice described could reasonably be expected to cause death or serious physical harm before such condition or practice can be abated. *from operating controls*

☒ There has been a violation of *75.1725* of Part *75*, Title 30, Code of Federal Regulations, a mandatory health or safety standard, but the violation has not created an imminent danger.

☐ The undersigned further finds:

- ☐ the violation is of such nature as could significantly and substantially contribute to the cause and effect of a mine safety or health hazard, and is caused by an unwarrantable failure to comply with such standard.
☐ The violation was found ☐ during the same inspection in which
☐ during a subsequent inspection made within 90 days after

Notice No. was issued on, 19.....

and is also caused by an unwarrantable failure to comply with such standard.

☐ the violation is similar to the violation of the mandatory health or safety standard which resulted in the issuance of Withdrawal Order No. on, 19....., and no inspection of the mine has been made since such date which disclosed no similar violation.

ACTION REQUIRED

☒ NOTICE

The violation of the mandatory health or safety standard described above shall be totally abated by *8* o'clock *P.M.* on *DECEMBER 21*, 19*76*

☐ ORDER

You are hereby ORDERED to cause immediately all persons, except those referred to in subsection (d) of section 104 of the Act, to be withdrawn from, and to be prohibited from entering, the area of the mine described below until an authorized representative of the Secretary of the Interior determines that the imminent danger no longer exists or the violation of the mandatory health or safety standard has been abated.

Area of Mine

Cont'd Sheet No.

Signed *William P. ...*
Authorized Representative

Orders 101 (a) (1) 101 (c) (1) 101 (d) (2) ☐
Notices 101 (b) (1) 101 (e) (1) ☐

2000.5
(Oct. 1974)

UNITED STATES
DEPARTMENT OF THE INTERIOR
MINING ENFORCEMENT AND SAFETY
ADMINISTRATION

District 9
Denver Colorado
P.O. Box 15037
Denver Colo 80215

TO THE OPERATOR, OR HIS AGENT, OF THE

Thorwest MINE
Company Thorwest State of Utah Coal Co.
Location Thorwest, Garfield County, Utah
I.D. No. 05-00294

No. 14184

Time: 5:15 ☐ A.M. ☒ P.M.

Date: Dec. 18, 1976 Thoyel Miller, Mine Inspector
(Person Served)

Sec. 103 (f) of the Federal Coal Mine Health and Safety Act of 1969 (83 Stat. 712; 30 U.S.C. 801; P.L. 91-173) provides that in the event of any accident occurring in a coal mine, an authorized representative of the Secretary, when present, may issue such order as he deems appropriate to insure the safety of any person in the coal mine.

Accident Description
A fatal roof fall accident has occurred at the mine. This order is issued to allow for an investigation into the cause of the accident, and the means or methods necessary to prevent a similar accident.

Area of Mine

@ Main

☒ ORDER: Pursuant to Sec. 103 (f) of the Act, you are hereby ORDERED to cause immediately all persons, except as otherwise provided by an authorized representative of the Secretary or as specified below, to be withdrawn from, and to be prohibited from entering, the area of the mine described above until otherwise notified by an authorized representative of the Secretary.

☐ OTHER ORDERS: Pursuant to Sec. 103 (f) of the Act you are hereby ORDERED to—

[Continued Sheet]

The following persons are permitted to remain in, or to enter, the area of the mine described, subject to the above Orders and subject to the further order, direction, and control of an authorized representative of the Secretary, and for the purpose stated:

1. All persons except Company officials
2. Officials of the U. M. W. A.
3. Officials of the Colorado Division of Mines
4. MESA Investigation team

Form 103(f)

Signature

William P. [Signature]
Authorized Representative

UNITED STATES DEPARTMENT OF THE INTERIOR
MINING ENFORCEMENT AND SAFETY ADMINISTRATION

Denver DIST#7

Special Invest.

P.O. Box 15037

No. _____

Denver, Colo. 80215

December 20, 1976

(Date of issuance)

To the operator of the Somerset

(Mine)

United States Steel Corp.

(Company)

Somerset, GUNNISON COUNTY, Colo.

(Location of mine)

P.O. Box I Somerset Colo

(P.O. address of operator)

81434

Notice is hereby given that Order No. 1 WRW

dated Dec. 18, 1976

and Orders _____

are hereby

☒ Terminated

☐ Modified as follows:

The accident investigation is completed

and as so modified shall continue in full force and effect.

*Served to Paul Watson
at the mine office on December 30, 1976
at about 12:40 p.m.*

103 (a) (1) (f)

Termination or Modification

Signed

William R. Ketch

Authorized Representative